



SEA spol. s r.o.

Společnost pro elektronické aplikace

Company SEA spol. s r.o. was established in 1992 and holds the ISO 9001:2001 certificate.

SP8, SPA8, SP8 BOX, SPA8 BOX

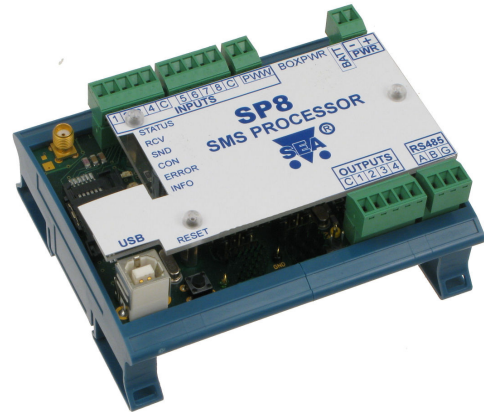
Control and Monitoring of Technology equipment via GSM

Basic Characteristics SP8

SP8 is a powerful remote control and monitoring device. It enables to monitor 9 logical inputs and to control 4 logical outputs via GSM network. SP8 and SPA8 use SMS messages for monitoring and remote control. Data connection CSD is used for remote device configuration. The behavior of a device and names of inputs and outputs are fully selectable from PC with configuration program (free of charge, can be downloaded from SEA website). The connection with SP8 is via USB cable or remotely over GSM network (data connection, CSD.) using supplied configuration software. The predefined emergency conditions may result in sending a SMS message to the list of telephone numbers (boiler failure, gas leakage, rapid drop or rise of temperature or level) including information about the failure and restoration of power supply.

The device has internal Li-Ion battery 3.6V/1700mAh, that can keep the device in operation without power for about 10 hours.

There is also RS485 communication port, that can be used for remote maintenance of the main control system (PLC). After making data call to SP8, the device accepts the call and after CONNECT comes from modems the data flow is directed to RS485 communication port.



Advantages of SP8

- **Simple installation**
attachable to DIN rail
- **Easy control**
just send a SMS message "STATE" to receive a message about the state of the device inputs and outputs
- **Configuration and monitoring SW**
user friendly PC SW works either locally via USB port or remotely using data call
- **Backup power supply**
regarding Li-Ion battery, the device can operate during main power failure

Technical Data SP8

Power supply:

8 – 30V (max. 120mA for 12V)

AKU battery:

Li-Ion 3,6V / 1700mAh, min. life span 10 hours

Logical inputs galvanically separated:

9 inputs (8 - 30V / 5mA for 12V)

Logical outputs galvanically separated:

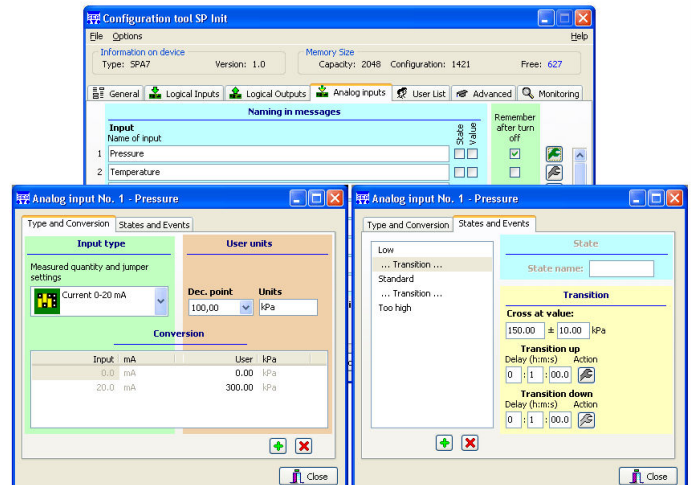
4 outputs (60V / 100mA)

Communication Ports: USB 1.0 for programming and monitoring, RS485 for other technologies

Operating temperature: -20° to +55°C

PC configuration SW (free of charge)

For Windows 2000, XP and Vista



Basic characteristic SPA8

Device SPA8 is expanded variant of SP8.

SPA8 has also 2 analog inputs, that may be configured like digital and so total maximum 11 logical inputs are available.



The user of SPA8 can select each of two analog inputs as voltage (0 to 10V), current (0 to 20mA) temperature (for cheap sensors KTY81-210 and precise Ni5000 temperature sensors) or for function like another logical input. The analog values measured on inputs can be send in SMS in actual user units and values like 7.9 MPa or 735 kg (configurable recalculation including non linear functions included).

Technical Data SPA8

Power supply: 8 – 30 V (max. 120mA for 12V)
AKU: Li-Ion 3,6V / 1700mAh, min. life span 10 hours

Logical inputs galvanically separated:
 9 inputs (8 - 30V / 5mA for 12V)

Logical outputs galvanically separated:
 4 outputs (60V / 100mA)

Analog inputs:
 2 inputs (12 bit converter) jumper selectable as
 a) voltage 0 – 10V
 b) current 0 - 20mA
 c) temperature, KTY81-210 sensor +/-1.5 ... +/-3°C
 d) temperature, Ni5000 sensor +/-0.2 ... +/-0.5°C
 e) another galv. separated logical input 8 ... 30V

Communication Ports: USB 1.0, RS485
Operating temperature: -20° to +55 °C

Basic characteristic SP8 BOX

SP8 BOX is an accessory for SP8 and SPA8. SP8 BOX is a plastic box meeting the IP55 standard. It is equipped with 230V AC power supply and backup battery for about one week operation.

SP8 BOX also contains galvanically separated power supply for log. inputs and outputs, which is very important for use in electrically noisy environment.

Advantages of SP8 BOX

- **Simple instalation**
the device is completed in a plastic box IP55 ready for wall mounting
- **AKU for long-term power failure**
power supply 230 V AC and backup AKU 12V / 1.2Ah



Technical Data SP8 BOX

Power supply: 230V AC / 5W
Protection: IP55
Operating temperature: -20° to +55 °C

Use of SP8, SPA8 (BOX)

- **Boiler houses, heating plants and heat pumps**
- **Industrial objects** – water plants, water reservoirs, small hydroelectric stations, boiler plants
- **Technology processes** – fault report, gas escape, drop or rise of temperature or level, freezing point monitoring

GSM device comparison

	SP6	SPA7	SPA7+SPA7 EXP	SP8	SPA8
Backup AKU	--	--	--	AKU 3,6V /1700mAh min. 12h file span	AKU 3,6V /1700mAh min. 12h life span
Log. inputs 8-30V DC (5mA/12V)	8	8	8	8	8
Log. input 8-30V DC/AC	1	1	1	1	1
Analog inputs	--	2 (also as logical)	12 (also as logical)	--	2 (also as logical)
Log. outputs 60V/100mA	8	4	8	4	4
Analog outputs	--	--	2	--	--